A B C		F G H	ı	J	K	L	М
Helena	Climate Change Task Force						
	Plan Spring 2013 - based on original, September 2	2009					
		Accomplishment	Current		Estimate	d Savings / Costs	
				Initial Cost	Annual	Annual	
37 . A .	ction Plan Items are shown in Sections B. thru E. below	Comments	Status	Differential	Energy Saved	Dollars Saved	Comments
Note: Ac	ction Plan Items are snown in Sections B. thru E. below	Comments	Status	Differential	Energy Saveu	Donars Saveu	Comments
A. Bey	ond the Climate Action Plan - Accomplishments						
1	Wastewater						
	a. Domestic Hot Water (on-demand)	Reduce Energy	Completed 3 of 4 hot water tank systems	\$ 4,000	880 DKT	\$ 9,680	
	<b>b.</b> Solar PV System at Wastewater Administration	Reduce Energy	Completed 2009	-	26280 kWh/yr	\$ 1,524	NWE grant \$25,000
	c. Purchased Hybrid Vehicle for Superintendent	Reduce Fuel Consumption	Purchased and operational.	\$ 29,000			Fuel savings
	d. Power Demand Monitoring Meters	Reduce Energy	Purchased and operational. (5 yrs)	\$ 500			Power demand awareness
	e. Variable Speed Drive for Blowers (demand)	Reduce Energy	Operational 2008	\$ 103,205	460,986 kWh/hr	\$ 39,305	NWE grant \$64,000
	f. Heat Recovery for Secondary Blower	Reduce Energy	Operational 2008	\$ 30,000	129310 kWh/yr		NWE grant \$20,000
	g. Variable Speed Drive for Non Pot Pumps	Reduce Energy	Operational 2008	\$ 18,000	57,323 kWh/yr		NWE grant \$12,000
	h. Lighting Upgrade	Reduce Energy	Completed 8/2010	\$ 7,200			50% reduction
	i. Variable Speed Dive for Waste Pit Pump	Reduce Energy	Completed 2006				20% reduction
	j. Boiler Upgrade/Methane	Reduce Energy	Operational since 2002	\$ 20,000	15525 DKT	\$ 31,000	
	k. Outdoor Lighting Conversion	Reduce Energy	Completed in 2001				50% reduction
	l. Efficient Unit Heaters/Windows/Insulation	Reduce Energy	Completed over the last 2 years.				
	<b>m.</b> Reverse Osmosis in the laboratory	Reduce Energy and O&M costs	Complete in 2011	\$ 1,541	4,611 kWH/yr	\$ 5,726	NWE grant of \$1,400 (\$4 energy & \$5,325 O&M)
	n. Waste oil heater in Maintenance Shop	Reduce Energy	Completed May 2012	\$ 13,385	1,100 DKT	\$ 10,000	energy & \$5,525 Gain)
	Water						
	Water  a. Solar Aerators (Chessman Reservoir)	Deduction in Chamical was a /officient to actual	Complete d/Operational/an asing	\$ 86,000		¢ 25,000	Chemical savings
	b. TMTF Lighting upgrade	Reduction in Chemical usage/efficient treatment	Completed/Operational/on-going Completed	\$ 86,000	200,000kWh/yr	\$ 25,000	
	ADTED I : 1 : Figg. : D	Reduce Energy much like TMTP recommendation	Complete in November 2010		23,739 kWh/yr	\$ 722	
	d. MRTP Backwash/Recycle	Reuse of Bureau of Reclamation Water	Permit Received - FY11 Preliminary Request	3,930	23,739 KWII/yI	Ψ 122	
	e. MRTP Energy Efficient Boiler	Reduced nature gas consumption	In Use since 2007	\$20,000			20% natural gas reduction
	f. TMTP Backwash/Recycle	Recycle Ten-mile Creek Water	Design/Construction 2013/2014	Ψ20,000			2070 Hatarar gas reduction
	g. Heat Recovery for HVAC system at Tenmile	Reduce Energy	Completed	\$ 409,000	490,000 kWh/yr	\$ 40,000	grants \$307,000
	h. Domestic Hot Water (on demand) for MRTP	Reduce Energy  Reduce Energy	Purchased in FY11	\$ 1,000	•	Ψ +0,000	βιαπισ φ307,000
	i. Power Demand Meter for MRTP	Reduce Energy	Operational since 2005	\$ 250			Energy demand awarenes
	j. Clearwell and pump station - MRTP	Reduce Energy	Completed Fy2010	250			
	k. Tenmile Watershed Collaborative Committee	Formed and recommendations made 2009	Recommendations unanimously approved by city				
			commission July 2009				
	Source Water Protection Plan		Ongoing meetings of stakeholder representatives				
	l. FEMA Grant for fire mitigation on the Red Mtn Flume	Contracts have been awarded - prj to start in fall of 2010					FEMA grant \$312,831
	m. Agreement with FWP	Release 1 cfs of water to Ten Mile Creek when it drops below 4 cfs	Agreement approved by Commission 2010	+			
	n. Comprehensive Performance Evaluation (Optimization)	Completed optimization study 2009	Floc/sed bldg. near completion spring 2013				
	o. VFD/new pump/low zone control/Boiler control	Reduce energy and improve process control	Project completed in 2012	\$ 61,530	103,704 kW/387 DKT	\$ 24,459	NWE grant \$32,000
						,	
3	Park & Recreation Vehicles and Equipment						
	a. Golf Course - Hybrid greens mowers	Reduced sound levels and fuel consumption	2 hybrid greens mowers in use since 2006				
	<b>b.</b> Snow Removal - smaller equipment	Fuel Savings					
	c. Park vehicles	Use of ethanol blend fuels and synthetic oil					
	d. Saws & Trimmers	4 stroke engines use less gas and burn cleaner					
	e. Toolcat (Multi-function Skidsteer)	Minimizes volume of on-site equipment - fuel savings					
4	Water Conservation - Irrigation						
	a. Golf Course - Wells for Irrigation	Developed wells to stop irrigating w/ City treated water					
	<b>b.</b> Parks - centralized computer control of irrigation	Automatic sprinklers in all parks, no day time watering					
	rarks - centralized computer control of irrigation	Automatic sprinklers in an parks, no day time watering					

Action Pla	Golf Course - Conducted a NW Energy Audit Golf Course - Irrigation System Upgrades  Golf Course - Large Urban Green Space Kindrick Legion Field - on-demand water heater Brewers Clubhouse - electronic water boilers Swim Pool - electronic water boilers	Reduced aerators run time by 14/hrs day Heating cost reduction and Energy savings  Heating cost reduction and Energy savings  Studied Energy Usage and Options Identified potential Water & Energy Savings. Received a DNRC grant to conduct an irrigation audit. Completed an irrigation study with recommendations for irrigation improvements.  turf & trees sequester CO@ and release O2 Reduced energy consumption	Current  Status  Completed in 2009  Moving forward with a project plan.	Initial Cost Differential	Estimated Annual Energy Saved	Savings / Costs Annual Dollars Saved	Comments
Note: Action 5 Pa a. b. c. c. d. d. e. f.	ark & Recreation Golf Course - Pond Aerator run time reduction Golf Course - Thermostats @ 64 for work and 55 non-work Golf Course - Shutters on Office Windows Golf Course - Conducted a NW Energy Audit Golf Course - Irrigation System Upgrades Golf Course - Large Urban Green Space Kindrick Legion Field - on-demand water heater Brewers Clubhouse - electronic water boilers Swim Pool - electronic water boilers	Reduced aerators run time by 14/hrs day Heating cost reduction and Energy savings  Heating cost reduction and Energy savings  Studied Energy Usage and Options Identified potential Water & Energy Savings. Received a DNRC grant to conduct an irrigation audit. Completed an irrigation study with recommendations for irrigation improvements.  turf & trees sequester CO@ and release O2 Reduced energy consumption	Status  Completed in 2009  Moving forward with a project plan.		Annual	Annual	Comments
5 Pa a. b. c.	ark & Recreation Golf Course - Pond Aerator run time reduction Golf Course - Thermostats @ 64 for work and 55 non-work Golf Course - Shutters on Office Windows Golf Course - Conducted a NW Energy Audit Golf Course - Irrigation System Upgrades Golf Course - Large Urban Green Space Kindrick Legion Field - on-demand water heater Brewers Clubhouse - electronic water boilers Swim Pool - electronic water boilers	Reduced aerators run time by 14/hrs day Heating cost reduction and Energy savings  Heating cost reduction and Energy savings Studied Energy Usage and Options Identified potential Water & Energy Savings. Received a DNRC grant to conduct an irrigation audit. Completed an irrigation study with recommendations for irrigation improvements.  turf & trees sequester CO@ and release O2 Reduced energy consumption	Status  Completed in 2009  Moving forward with a project plan.		Annual	Annual	Comments
5 Pa a. b. c. d. e. f.	ark & Recreation Golf Course - Pond Aerator run time reduction Golf Course - Thermostats @ 64 for work and 55 non-work Golf Course - Shutters on Office Windows Golf Course - Conducted a NW Energy Audit Golf Course - Irrigation System Upgrades Golf Course - Large Urban Green Space Kindrick Legion Field - on-demand water heater Brewers Clubhouse - electronic water boilers Swim Pool - electronic water boilers	Reduced aerators run time by 14/hrs day Heating cost reduction and Energy savings  Heating cost reduction and Energy savings Studied Energy Usage and Options Identified potential Water & Energy Savings. Received a DNRC grant to conduct an irrigation audit. Completed an irrigation study with recommendations for irrigation improvements.  turf & trees sequester CO@ and release O2 Reduced energy consumption	Completed in 2009 Moving forward with a project plan.				Comments
5 Pa a. b. c. a. d. e. f.	ark & Recreation Golf Course - Pond Aerator run time reduction Golf Course - Thermostats @ 64 for work and 55 non-work Golf Course - Shutters on Office Windows Golf Course - Conducted a NW Energy Audit Golf Course - Irrigation System Upgrades Golf Course - Large Urban Green Space Kindrick Legion Field - on-demand water heater Brewers Clubhouse - electronic water boilers Swim Pool - electronic water boilers	Reduced aerators run time by 14/hrs day Heating cost reduction and Energy savings  Heating cost reduction and Energy savings Studied Energy Usage and Options Identified potential Water & Energy Savings. Received a DNRC grant to conduct an irrigation audit. Completed an irrigation study with recommendations for irrigation improvements.  turf & trees sequester CO@ and release O2 Reduced energy consumption	Completed in 2009 Moving forward with a project plan.	Differential	Energy Saved	Dollars Saved	Comments
5 Pa a. b. c. d. e. f.	Golf Course - Pond Aerator run time reduction Golf Course - Thermostats @ 64 for work and 55 non-work  Golf Course - Shutters on Office Windows Golf Course - Conducted a NW Energy Audit Golf Course - Irrigation System Upgrades  Golf Course - Large Urban Green Space Kindrick Legion Field - on-demand water heater Brewers Clubhouse - electronic water boilers Swim Pool - electronic water boilers	Heating cost reduction and Energy savings  Heating cost reduction and Energy savings  Studied Energy Usage and Options  Identified potential Water & Energy Savings. Received a DNRC grant to conduct an irrigation audit. Completed an irrigation study with recommendations for irrigation improvements.  turf & trees sequester CO@ and release O2  Reduced energy consumption	Moving forward with a project plan.				
a. b. c.	Golf Course - Pond Aerator run time reduction Golf Course - Thermostats @ 64 for work and 55 non-work  Golf Course - Shutters on Office Windows Golf Course - Conducted a NW Energy Audit Golf Course - Irrigation System Upgrades  Golf Course - Large Urban Green Space Kindrick Legion Field - on-demand water heater Brewers Clubhouse - electronic water boilers Swim Pool - electronic water boilers	Heating cost reduction and Energy savings  Heating cost reduction and Energy savings  Studied Energy Usage and Options  Identified potential Water & Energy Savings. Received a DNRC grant to conduct an irrigation audit. Completed an irrigation study with recommendations for irrigation improvements.  turf & trees sequester CO@ and release O2  Reduced energy consumption	Moving forward with a project plan.				
a. b. c. a. d. d. e. f.	Golf Course - Pond Aerator run time reduction Golf Course - Thermostats @ 64 for work and 55 non-work  Golf Course - Shutters on Office Windows Golf Course - Conducted a NW Energy Audit Golf Course - Irrigation System Upgrades  Golf Course - Large Urban Green Space Kindrick Legion Field - on-demand water heater Brewers Clubhouse - electronic water boilers Swim Pool - electronic water boilers	Heating cost reduction and Energy savings  Heating cost reduction and Energy savings  Studied Energy Usage and Options  Identified potential Water & Energy Savings. Received a DNRC grant to conduct an irrigation audit. Completed an irrigation study with recommendations for irrigation improvements.  turf & trees sequester CO@ and release O2  Reduced energy consumption	Moving forward with a project plan.				
a. d.	Golf Course - Thermostats @ 64 for work and 55 non-work  Golf Course - Shutters on Office Windows Golf Course - Conducted a NW Energy Audit Golf Course - Irrigation System Upgrades  Golf Course - Large Urban Green Space Kindrick Legion Field - on-demand water heater Brewers Clubhouse - electronic water boilers Swim Pool - electronic water boilers	Heating cost reduction and Energy savings  Heating cost reduction and Energy savings  Studied Energy Usage and Options  Identified potential Water & Energy Savings. Received a DNRC grant to conduct an irrigation audit. Completed an irrigation study with recommendations for irrigation improvements.  turf & trees sequester CO@ and release O2  Reduced energy consumption	Moving forward with a project plan.				
a. d.	Golf Course - Shutters on Office Windows Golf Course - Conducted a NW Energy Audit Golf Course - Irrigation System Upgrades Golf Course - Large Urban Green Space Kindrick Legion Field - on-demand water heater Brewers Clubhouse - electronic water boilers Swim Pool - electronic water boilers	Heating cost reduction and Energy savings  Studied Energy Usage and Options  Identified potential Water & Energy Savings. Received a DNRC grant to conduct an irrigation audit. Completed an irrigation study with recommendations for irrigation improvements.  turf & trees sequester CO@ and release O2  Reduced energy consumption	Moving forward with a project plan.				
a. d. e. f.	Golf Course - Conducted a NW Energy Audit Golf Course - Irrigation System Upgrades  Golf Course - Large Urban Green Space Kindrick Legion Field - on-demand water heater Brewers Clubhouse - electronic water boilers Swim Pool - electronic water boilers	Studied Energy Usage and Options  Identified potential Water & Energy Savings. Received a DNRC grant to conduct an irrigation audit. Completed an irrigation study with recommendations for irrigation improvements.  turf & trees sequester CO@ and release O2  Reduced energy consumption	Moving forward with a project plan.				
	Golf Course - Irrigation System Upgrades  Golf Course - Large Urban Green Space Kindrick Legion Field - on-demand water heater Brewers Clubhouse - electronic water boilers Swim Pool - electronic water boilers	Studied Energy Usage and Options  Identified potential Water & Energy Savings. Received a DNRC grant to conduct an irrigation audit. Completed an irrigation study with recommendations for irrigation improvements.  turf & trees sequester CO@ and release O2  Reduced energy consumption	Moving forward with a project plan.				
	Golf Course - Irrigation System Upgrades  Golf Course - Large Urban Green Space Kindrick Legion Field - on-demand water heater Brewers Clubhouse - electronic water boilers Swim Pool - electronic water boilers	Identified potential Water & Energy Savings. Received a DNRC grant to conduct an irrigation audit. Completed an irrigation study with recommendations for irrigation improvements.  turf & trees sequester CO@ and release O2  Reduced energy consumption					
	Kindrick Legion Field - on-demand water heater  Brewers Clubhouse - electronic water boilers  Swim Pool - electronic water boilers	recommendations for irrigation improvements.  turf & trees sequester CO@ and release O2  Reduced energy consumption					
	Kindrick Legion Field - on-demand water heater  Brewers Clubhouse - electronic water boilers  Swim Pool - electronic water boilers	recommendations for irrigation improvements.  turf & trees sequester CO@ and release O2  Reduced energy consumption					
	Kindrick Legion Field - on-demand water heater  Brewers Clubhouse - electronic water boilers  Swim Pool - electronic water boilers	Reduced energy consumption	G CH : : :				
	Kindrick Legion Field - on-demand water heater  Brewers Clubhouse - electronic water boilers  Swim Pool - electronic water boilers	Reduced energy consumption	Carefully maintained on an ongoing basis				
	Brewers Clubhouse - electronic water boilers Swim Pool - electronic water boilers		In use since 2006				
f.	Swim Pool - electronic water boilers	Reduced energy consumption	In use since 2009				
		Reduced energy consumption	In use since 2009				
g.	Swim Pool - thermal pool blankets	Reduced heating/ energy consumption	In use since 1985				
h.	Memorial warming house - boiler electronic ignition	Eliminated pilot light - reduced energy consumption	In use since 1995				
h.	Memorial warming house - replaced windows	Energy savings through efficient windows	In use since 2009				
j.	Open Lands forest health enhancement	Forest fuel treatment on open lands to reduce the risk of wildfires and ehance forest health. Completed 580 acres of open lands forest restoration since 2008 and 72 acres along the 10-mile flume	Expect to complete project by Spring 2014				
k.	Open lands wildfire risk reduction projects	Forest fuel treatment on open lands and along the 10-Mile Flume to reduce the risk of wildfires and ehance forest health. Completed 580 acres of open lands forest restoration since 2008 and 72 acres along the 10-mile flume					
6 <b>Z</b> 0	oning Ordinance Update						
a.	Elimination of min. lot size and building size	Encourages infill development	Completed				
b.	increase lot coverage in some districts	Encourages infill development	Completed				
c.	allows residential uses by right in most commercial districts	Encourages mixed use development	Completed				
d.	added urban Wildland chapter/zoning overlay	Added additional requirements for roofing materials and vents	Completed				
7 Su	ubdivision Regulations						
a.	Requires non motorized facilities as part of design	Requirements in Engineering Design standards	Completed				
8 Gr							
8 Gr	rowth Policy Update						
a.	Addition of Water chapter	Identifies policies relating to water quality, quantity and conservation	Draft				
<b>b.</b>	Addition of Environment chapter	ID goals associated with energy/global climate change	Draft				
9 15	5th Street Parking Ramp						
	Install Induction and T5 Lighting	Reduced energy consumption	Completed				
	Design, Build & Program Lighting Controller	Reduced energy consumption	Completed				1/2 the cost/space of othe garages

A B C	D E	F G H	I	J	K	L	M
Helena	Climate Change Task Force						
	Plan Spring 2013 - based on original, September	2009					
		Accomplishment	Current		Estimated	Savings / Costs	
		•		Initial Cost	Annual	Annual	
Note: Ac	ction Plan Items are shown in Sections B. thru E. below	Comments	Status	Differential	Energy Saved	Dollars Saved	Comments
					-		
10	City-County Administration Building (CCAB)						
10	a. CCAB Boiler	Boiler upgrades	Completed	\$ 157,800	6% natural gas savings	\$3.180.00	Completion due 10/28/11
	b. CCAB Control Valve Replacement	Replace all radiator control valves	Completed		12% natural gas savings	\$6,300.00	Completion due 10/26/11
	c. CCAB Steam System	Steam Distribution upgrades	Completed		3% natural gas savings	. ,	Completion date 9/30/11
	d. CCAB Windows	Window Repair/upgrades	Ongoing	, ,,,,,,	2 / V	+ -,- 2 3 1 3 3	
	e. 2nd Floor Remodel	Air-to-air heat exchanger	Completed				
	f. Energy efficient mail vehicle	Hybrid or electric vehicle for mail delivery to City/County bldgs	Pending purchase in FY13				
	g. IT Virtualization of servers	Awarded \$4,500 in energy rebates for this effort	Completed				
11	New HATS Building						
	a. Boilers	High efficient radiant floor heat system	Completed				
	<b>b.</b> Lighting	High efficient lighting	Completed				
	c. Bus Wash	High efficient water recirculation bus wash system	Completed				
	d. Air handling system	High efficient air-to-air heating system	Completed				
	City Shop						
	a. New water heater	N. P.L. C. L. L. L.	Completed		00.750 1/3/11	Φς 0ς 7, 00	G 1 .: 1 . 2/20/12
	b. Lighting	New lighting in main shop and wash bay	Pending installation		80,758 KWH	\$6,965.00	Completion date 3/30/12
12	Solid Waste Shop						
	a. Lighting	High efficient lighting	Pending installation		12,110KWH	\$1 175 00	Completion date 12/30/11
	a. Digiting	The criteria against	1 chang instantation		12,1101(111	Ψ1,173.00	Completion date 12/30/11
14	Main Fire Station						
	a. New lighting in apparatus floor	High efficient lighting	Completed		12,809 KWH	\$1,243.00	
	<b>b.</b> New boiler controls		Completed		,	. ,	
	c. New low energy condinsate pump		Completed				
15	Eastside Fire Station						
	a. New lighting in apparatus floor	High efficient lighting	Completed		14,762 KWH	\$1,404.00	Completion date 9/30/11
16	Community Development						
	a. Energy Code	Adoption of 2009 edition of International Energy Conservation Code	Completed				
	<b>b.</b> Seminars on Green building	Webinars on LEED and Green building provided by Building Dept.	Ongoing as available				
NT-4-	vorthy:						
	ty Water/Wastewater Superintendent Don Clark received the 2011	PottorPrioka Assaud for a Facility Managar/Onaratar					
	•	and recognize individuals in Oregon, Washington, Idaho and Montana who					
	ading efforts to make buildings high-performance and efficient.	and recognize murriduais in Oregon, washington, tuano and montana who					
		nents of the City of Helena completed a year-long Strategic Energy Management					
		west Energy Efficiency Alliance (NEEA). The Cohort was a collaborative effort					
	ergy management making Montana companies more competitive an						
			nonts and intermedal transportation artisms in the				
	reordary, 2013, the City of Heiena nosted public meetings for the C town area.	Greening America's Capitals program to explore effective green stormwater treatn	ients and intermodel transportation options in the				
aownt	iowii area.						

Α	А В С	D E	F G	Н	I	J	K	L	M
1	Helena	Climate Change Task Force							
2		Plan Spring 2013 - based on original, Septemb	er 2009						1
2				Accomplishment	Current		Fetimated	Savings / Costs	
3				Accompnishment	Current	T. 22. 1 C4	1		
4				~	a.	Initial Cost	Annual	Annual	
5	Note: Ac	ction Plan Items are shown in Sections B. thru E. be	elow	Comments	Status	Differential	Energy Saved	Dollars Saved	Comments
6									
131	B. Imp	lementation	IMP -						
		tion Plan Items )							
132	( Act	tion I tan Hems)							
133									
134	1	Sustainability Coordinator	IMP - 1						
135 136		>> City accomplishment recognized in the Action Plan		FTE not sustainable, responsibilities shifted to city directors/staff					
136		a. Grant Coord - Energy, Water, Resources							
137		<b>b.</b> Programs & Policies - Sustainability							
138		c. Track - Climate & Green Implementation							
139		d. Coordinate - Green Team & Conserv Board							
140		e. Report - GHG, Water, Energy, Fuel, Costs							
141		f. Education - Coordinate DOE/Public/Private							
142		g. Grants & Partnerships to leverage City resources							
143 144		<ul><li>h. Staff &amp; Coord - Green Team</li><li>i. Staff &amp; Coord - Citizen Conservation Board</li></ul>							
144		1. Starr & Coord - Citizen Conservation Board							
	2	Green Team		City Directors Group appointed as Green Team to emphasize Full Scope involvement					
146 147		a. Track Implementation & Recommendations							
148		<b>b.</b> Sustainability Policies, Programs and Processes							
149		<b>c.</b> Coord. inter-department sustainability initiatives							
150		<b>d.</b> Low/No Cost resource savings practices at work							
151		e. Sustainability Education - City Staff							
152		f. Annual Environmental Sustainability Progress Report		This Matrix is a perpetual record of Sustainability Progress					
153 154 155		g. Green Purchasing List			The City does not have "Central" Purchasing				
154			7.5						
155	3	Citizen Conservation Oversight Board		HCC may act as the volunteer board on these issues if necessary.	G v 14 v 2000 4 d Di G 1 v 1				
450		>> City accomplishment recognized in the Action Plan		Helena Climate Change Task Force	Sunsetted August, 2009 - Action Plan Completed				
156 157		>> City accomplishment recognized in the Action Plan		Helena Open Lands Mgmt Advisory Council (HOLMAC) Est-1997	Ongoing				
157 158		a. City & Community-wide Conservation		Herena Open Lanus Ingmi Auvisory Councii (HOLMAC) Est-1997	Ongoing	+			
158 159		b. Amend other Authority, Board, Committee Missions							
100		c. P&R - Coordination of forest resource projects with			Ongoing	+			
160		HOLMAC			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
161		d. P&R - Coordination with City/County Parks Board			Ongoing				
160 161 162									
163	4	Education & Outreach - GHG and Conservation	IMP - 4						
163 164		>> City accomplishment recognized in the Action Plan		Helena Area Transportation System (HATS)	Education & Advertising is Ongoing				
165		a. Co-sponsor tours and seminars							
166		<b>b.</b> "Bike to Work Week" type events							
167		c. Publicize options - website links, fliers, mailings							
168		d. Publicize City "Lead by Example" projects							
169		e. Annual Awards - Staff & Community							
170		f. Utilize Fed & State programs		Participated in Greening America's Capitals program through the EPA	Mar'13-Apr'13 Receiving public comments on recommendations				
171		g. Annual City Environmental Footprint Report							
172 173		h. Community businesses sustainability program							
173		i. Helena Schools sustainability curriculum							
174									

	A B C	D E	F G	Н	ı	J	K	L	M
1	Helena	Climate Change Task Force	<u> </u>	•					
		Plan Spring 2013 - based on original, Septemb	or 2000						
2	Action	Tian Spring 2013 - based on original, Septemb	Jei 2009					~	
3				Accomplishment	Current		Estimated	Savings / Costs	
4						Initial Cost	Annual	Annual	
5	Note: A	ction Plan Items are shown in Sections B. thru E. be	elow	Comments	Status	Differential	<b>Energy Saved</b>	Dollars Saved	Comments
6									
175	5	Data Collection, Monitoring and Reporting	IMP - 5						
176		>> City accomplishment recognized in the Action Plan		2001 thru 2007 Data Collection - ICLEI format	Completed 10/08				
177		>> City accomplishment recognized in the Action Plan		Original ICLEI Database	Staff intensive with limited reporting capabilities				
178		>> City accomplishment recognized in the Action Plan		Access to NWE energy audit information	Sum monst with minute reporting supremites				
179		a. Systemize Data Collection		Ongoing Data Collection	DEQ Partnership - Energy CAP				
180		b. Database Software Options							
181		c. Continue ICLEI membership							
182		d. Electricity			continued FY 2011				
183 184		e. Natural Gas							
184		f. Vehicle Fuels							
185		g. Solid Waste							
186 187									
	6	Greenhouse Gas Reduction Goal	IMP - 6						
188		>> City accomplishment recognized in the Action Plan		City-wide Energy Efficiency Projects	Reduced GHG 18.1% (01 thru 07) & Ongoing				
189		>> City accomplishment recognized in the Action Plan		Global Climate Change Resolution 19530	December 3, 2007				
190		>> City accomplishment recognized in the Action Plan		Commission Resolution of Budget Intent	May 5, 2008 and Ongoing				
191		>> City accomplishment recognized in the Action Plan		Stimulus Resolution	January 12, 2009				
192		>> City accomplishment recognized in the Action Plan		Energy Efficiency Stimulus Resol. Expansion	March 9, 2009				
193		<b>a.</b> 20% below 2007 levels by 2020							
192 193 194									
195	7	Mayor's Climate Protection Agreement	IMP - 7		Agreement signed 01/11/10				
196		>> City accomplishment recognized in the Action Plan							
197		a. Meet or beat Kyoto Protocol targets		Exceeded Kyoto Protocol target of 7% by 2012	Reduced GHG 18.1% (01 thru 07)				
198		<b>b.</b> Urge Fed & State Green policies and programs							
199		c. Urge Fed Green House Gas Reduction Legislation							
200									
199 200 201 202 203 204 205 206 207	8	Funding and Leveraging Resources	IMP - 8						
202		>> City accomplishment recognized in the Action Plan		Energy Efficiency and Conservation Block Grant	Ongoing				
203		>> City accomplishment recognized in the Action Plan		Annual Budget Provisions					
204		a. Set Structural Process to support Sustainability							
205		<b>b.</b> Pursue Grant and Partnership Opportunities		THE COLUMN					
206		c. TMTF - Energy Effic. & Conserv Block Grant		HVAC project will result in energy efficiency	Competitively Awarded \$62,000				
207									

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1	Helena	Climate Change Task Force							
		Plan Spring 2013 - based on original, Septemb	or 2009						
2	Action	rian Spring 2013 - based on original, Septeme	JCI 2007	A 19.1	G t			g • / G /	
3				Accomplishment	Current		T .	Savings / Costs	
4						Initial Cost	Annual	Annual	
5	Note: Ac	ction Plan Items are shown in Sections B. thru E. bo	elow	Comments	Status	Differential	<b>Energy Saved</b>	Dollars Saved	<b>Comments</b>
6									
	C Fno	rgy Efficiency & Municipal Operations	NRG -						
208			TURG						
209	( Ac	tion Plan Items )							
210									
211	1	TMTP - Lighting Upgrade		Efficient T5 Bulbs replaced existing.	Completed - Northwestern Grant Received				
212 213 214		>> City accomplishment recognized in the Action Plan		City/County Building Lighting Conversion to T-5's	Completed				
213									
214	2	TMTP - Water-Source Heat Pump	NRG - 2	Approved Stimulus/Northwestern Grants	Accepted NWE & ARRA grant monies				
215 216	2	TMTP - Biomass Generator	NRG - 3		Countrie manaire areast for de for ancient				
217	3	>> City accomplishment recognized in the Action Plan		FEMA Fuel Reduction Proj Red Mtn Flume	County is pursuing grant funds for project.				
218		>> City accomplishment recognized in the Action Plan		Moved to WTR-7					
217 218 219 220		>> Cuy accompashment recognized in the Action I tan		Moveu to WIR-7					
220	4	WWTP - Energy Efficiency Upgrades	NRG - 4						
[221]		>> City accomplishment recognized in the Action Plan		2001 thru 2007 Energy - Water & Wastewater	49% reduction (01 thru 07)				
222 223 224		>> City accomplishment recognized in the Action Plan		2001 thru 2007 Carbon Emissions - Water & Wastewater	37% reduction (01 thru 07)				
223		>> City accomplishment recognized in the Action Plan		Secondary Aeration Project	Ongoing 16% Electricity Savings				
224		>> City accomplishment recognized in the Action Plan		Methane Co-Generation - Stirling Engines	.5 million kWh/yr (7.4 year payback)				
225 226		>> City accomplishment recognized in the Action Plan		Waste Heat Recovery Project	110,000 kWh/yr (3.5 year payback)				
226		>> City accomplishment recognized in the Action Plan		Water Pumps VFD & PID controls - 57,000 kWh /yr	57,0000 kWh/yr (2.3 year payback)				
227		>> City accomplishment recognized in the Action Plan		T-12 to T-5 Lighting Fixtures	Northwestern Rebate Eligible - FY11 Budget				
228 229 230		>> City accomplishment recognized in the Action Plan		Computer Control System - plant energy	Pursuing \$300K Stimulus Grant - FY11 Budget				
229		WWW.DD Z	) TD G						
	5	WWTP - Zero Energy Target   >>   City accomplishment recognized in the Action Plan	NRG - 5	2001 thru 2007 Energy - Water & Wastewater	49% reduction (01 thru 07)				
237		>> City accomplishment recognized in the Action Plan >> City accomplishment recognized in the Action Plan		2001 thru 2007 Energy - water & wastewater 2001 thru 2007 Carbon Emissions - Water & Wastewater	49% reduction (01 thru 07) 37% reduction (01 thru 07)				
232		-> Cuy accompusament recognized in the Action Plan		2001 thin 2007 Carbon Emissions - Water & Wastewater	5170 Teduction (of und 07)				
231 232 233 234 235 236	6	Comprehensive Energy Management Strategy	NRG - 6						
235		>> City accomplishment recognized in the Action Plan		Centralized Facilities Department Established 2002	Ongoing Energy Management				
236		a. Energy Use Analysis		*	5 5 50				
237		<b>b.</b> Energy Use Goals							
237 238 239 240 241 242		c. Energy Use Action Plan (by July, 2010)							
239									
240		City Buildings - Energy-Efficiency Standards	NRG - 7						
241		a. Energy Efficiency Standard similar to State's SB49							
242									

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2	Action	rian Spring 2015 - based on original, Septemb	er 2009		C 4			G : /G /	
3				Accomplishment	Current			Savings / Costs	
4						Initial Cost	Annual	Annual	
5	Note: Ac	ction Plan Items are shown in Sections B. thru E. bei	low	Comments	Status	Differential	Energy Saved	Dollars Saved	Comments
6									
243	8	City Buildings - Lighting Efficiency	NRG - 8						
244		<b>a.</b> 40% Lighting Energy Reduction (after 2007)							
245		<b>b.</b> Occupancy Sensors		CCAB 2nd floor remodel	Completed				
246		c. Legion Field Lights		Apr-09	Completed				
244 245 246 247		d. Fire Dept Lights			Completed				
248 249		e. Civic Center LED Sign		Sep-09	Completed				
249		f. Airport Runway Lights							
250		g. P&R - Pedestrian Mall from 240 to 120v security lights		Energy Savings	In use since 1998				
05.1		h. P&R - Park building and area light changed for efficiency		Fluorescent/electronic ballast/ photocells/timers	Initiated in 2006 - 100% complete				
251 252 253		T DOD 155			1 . 2000				
252		I. P&R - new LED scoreboard at Kindrick Legion Field		Energy Savings	In use since 2009				
253		<ul><li>j. P&amp;R - new LED exit lights in all buildings</li><li>k. P&amp;R - Golf Course fluorescent bulbs and replaced T-12 to</li></ul>		LED exit lights in all buildings	Initiated in 2009 - 100% complete				
254		T-8		64% energy consumption savings					
254		<ul><li>l. P&amp;R - Walking Mall lights to LED lighting</li></ul>		Replacement of 215 high pressure sodium lights with LED lights (see	Completed in 2012. There has been a documented	\$9,800		\$2,600	
		1. 1 CK - Walking Main lights to ELD lighting		attached memo)	76.1% decrease in energy costs as well as	Ψ2,000		Ψ2,000	
255					maintenance costs.				
		m. Participate in Earth Hour 2013		Turned off all non-essential lights in City/County Building for 1 hour	Initiated March 22, 2013				
256		·							
257		n. Civic Center Lighting		New lighting in Ballroom Mezzanine to be installed June 2014	Pending Budget				
258									
256 257 258 259 260	9	City Bldgs Electrical Equip "Plug Loads" Reduction	NRG - 9						
260		a. Energy Efficient Technology							
261		<b>b.</b> Energy Conservation - Behavioral Changes							
262		c. Energy Star Procurement Policies							
263		d. Energy Saver features enabled							
264		Office Equipment - End of Day Shut Down							
265		Smart Power Strips (elim. Phantom loads)							
262 263 264 265 266 267	10	Conservation and Dana-rable Energy	NRG - 10						
268	10	Conservation and Renewable Energy - Policy Assistance from NWE and the PSC	NKG - 10						
268 269		a. Rate Structure							
270		b. Peak Savings Options							
271		c. Distributed Generation							
272									
272 273	11	City/County Facilities - Renewable Energy Projects	NRG - 11						
274		a. Biomass							
275		<b>b.</b> Solar							
276		c. Wind							
277		d. Geothermal							
278									
279	12	State Fuel Economy Standards	NRG - 12						
278 279 280 281 282		a. Federal Corporate Avg Fuel Economy Standard							
281		<b>b.</b> 30 mpg or Better for Vehicle Fleet							
282									

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3				Accomplishment	Current		Estimated	Savings / Costs	
4						Initial Cost	Annual	Annual	
5	Note: Ac	ction Plan Items are shown in Sections B. thru E. be	low	Comments	Status	Differential	Energy Saved	Dollars Saved	Comments
6									
283	13	Improve Fleet Performance	NRG - 12						
		a. Fleet Inventory Examination		with the purchase of a two hybrids we have purchased numerous					
				r 1/4 ton trucks to replace larger 1/2 ton trucks for better fuel					
			econor	ny. Newly purchased heavy duty diesel fueled trucks meet Tier 4					
284				ons requirements. Two recently purchased medium duty diesel fueled meet Tier 4 emissions requirements.					
204		<b>b.</b> Purchase smallest and most efficient vehicle that can do the	liucks	meet Tier 4 chinssions requirements.					
285		job							
286									
287			277.6						
285 286 287 288 289	14	Biodiesel Use & Supply	NRG - 13						
290	15	LED & Solar - Street and Parking Lights	NRG - 14						
233	15	a. Street Light Analysis		te owned and City owned traffic signals, flashers and pedestrian					
				igs in the City of Helena have been changed to LED lights.					
291 292 293									
292		b. LED & Solar Power for all New Lights							
293		<ul><li>c. Replace any Mercury-Vapor Lights with LED</li><li>d. Municipal coalition regarding NWE practices</li></ul>							
294		e. P&R - Park building and area light changed for efficiency	Fluore	scent/electronic ballast/ photocells/timers	See 8(h) above				
295		and their value of their values of their value		photocols, union	200 ((1) 12010				
295 296 297		f. Subdivision Streetlight Requirements			Will be part of Subdivision Regulations review				
297	1.5		VDG 15						
298		Employee Commute and Waste Reduction  a. Consider staggered work hours in some/more offices to	NRG - 15						
		mitigate the impacts of traffic congestion at 8:00 a.m. and							
299		5:00 p.m.							
		<b>b.</b> Consider alternate schedules (4/10's) for more offices to							
300 301		reduce travel one day per week.							
301			XX/DD						
302		er Supply, Treatment & Delivery	WTR -						
303	(Act	tion Plan Items )							
304 305	1	Water - Conservation Rates	WTR - 1		Discussed during FY11 Budget development				
306 307		>> City accomplishment recognized in the Action Plan	Lowes	t Base - Highest Volume Water Rates in State					
307		a. Tiered Water Rates							
308		<b>b.</b> Seasonal Water Rates							
308 309 310	2.	Water - Supply & Treatment Facility Upgrades	WTR - 2 (See S	ection A #2)					
311		a. x	x	·· <del>-</del> /					
311 312 313 314									
313	3	City "Lush & Lean" Landscaping	WTR - 3						
314		a. P&R - native vegetation landscaping	Where	applicable in new parks	FY 2010 - six new neighborhood parks				
315 316	4	Community - Water Conservation Incentives	WTR - 4						
317	4	a. Rebate Programs	W1N- 4						
318									

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4	A	DI I		Comments	G44				<u> </u>
5 <b>No</b>	te: Action	Plan Items are shown in Sections B. thru E. below		Comments	Status	Differential	Energy Saved	Dollars Saved	Comments
6									
319	5 Educa	ation & Outreach - Water Conservation W7	ΓR - 5						
320	a.	x		X					
321									
322	6 Water	r - Program to Regulate Use WT	ΓR - 6						
323	a.	Building Codes							
324	b.	Irrigation & Watering Regulation							
325	c.	Prohibitions on Wasteful Water Practices							
326	d.	Landscaping Regulations							
327									
328		r Supply & Watershed Protection WT	ΓR - 7						
329		City accomplishment recognized in the Action Plan		FEMA Fuel Reduction Proj Red Mtn Flume					
330	a.	TMDL and Non-point Source Management		Remove non-point source septic pollution through Westside					
331				annexations, i.e. Woodlawn Dunbar					
332		Stream & Riparian Conditions and Restoration		Maintenance Flow Agreement with MFWP					
333		Watershed Forest Management		FEMA Fuel Reduction pm flume	In bidding process				
334	d.	Watershed Plan - All Stakeholders		Forest Service/EPA/DEQ reviewing recommendations	Forest Service forestry plan				
335			_			_			
E.	Transpo	rtation, Waste, Recycling, and TWR	3P -						
337	Public-P	rivate Partnerships							
338	( Action )	Plan Items )							
339									
340	1 Trans	sportation District TWF	RP - 1		Transit District petition drive failed				
341	a.	Transit District							
342									
343		*	RP - 2						
344	a.	Complete Streets			Current /recent Commission Agendas Item				
345	b.	"Bicycle Friendly Community" designation							
346		Extend Centennial Trail bike/ped pathway							
347		P&R - Centennial Park Development		Park improvement includes trail development	Part of the major park improvement plans				
348	d.	Make pedestrian bump-outs bicycle friendly							
349		Bike/ped connections to major destinations							
350		Commuting classes and maps							
351	g.	Bicycle Police Patrols							
>==	1 1-	Inventory of ADA compliant and other intersections	1	Inventory near completion ADA committee prioritizing					
	h.			TD 12 1 11111 22 1 1 2					
353	h. i.	Update of ADA Transition Plan		Transition plan will identify needed improvements for greater access					
353 354	h. i.	Update of ADA Transition Plan	DD 2	Transition plan will identify needed improvements for greater access					
353 354 355		Update of ADA Transition Plan  Waste - Pay-As-You-Throw Program  TWF	RP - 3						
353 354 355 356	a.	Update of ADA Transition Plan  Waste - Pay-As-You-Throw Program  TWF  Hire SERA to design PAYT system		Police direction needed	Commission will asseiden assk assets Call				
352 353 354 355 356 357	a.	Update of ADA Transition Plan  Waste - Pay-As-You-Throw Program  TWF		Police direction needed Part of Residential Rate Resolution - Policy Direction	Commission will consider each year in fall				
353 354 355 356 357 358	a. b.	Update of ADA Transition Plan  Waste - Pay-As-You-Throw Program  Hire SERA to design PAYT system  Lower permit tonnage from 2 to 1 ton  by 1/1	1/10	Police direction needed Part of Residential Rate Resolution - Policy Direction Lowered permit tonnage from 2 to 1.5 tons FY12					
353 354 355 356 357	a.	Update of ADA Transition Plan  Waste - Pay-As-You-Throw Program  TWF  Hire SERA to design PAYT system	1/10	Police direction needed Part of Residential Rate Resolution - Policy Direction	Commission will consider each year in fall  Commission will consider each year in fall  Commission will consider each year in fall				

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		nate Change Task Force			ű	TX.	L	1111
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5 Note	e: Action	I tan items are snown in Sections B. thru E. below	Comments	Status	Differential	Energy Saved	Donars Saveu	Comments
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362		Waste - 35% Recycling Goal (EPA) TWRP -						
363		City accomplishment recognized in the Action Plan		Productive use of recycled material				
364		City accomplishment recognized in the Action Plan	P&R - Recycle oil, aluminum and waste metal	Recycling is a standard operating procedure				
365		Solid Waste diversion - 19% by 2011						
366		Solid Waste diversion - 22% by 2015						
367		Solid Waste diversion - 35% by 2020						
368 369	d.	Source Reduction: Waste Avoidance						
370		* "Living Lightly"  * PAYT system						
370		* Disposable Shopping Bag Fee"						
372		* Back to the Tap Policy						
373		Zuch to the Tup Tone;						
374	e.	Reuse (2nd Life)						
375								
376	f.	Recycling						
377		* Increase recycling drop-off sites	Added Fairgrounds and IR sites					
378			Added Dale Harris and Dillards for a total of 5 offsite locations					
379			Added Office Paper as Recyclable Item in Newspaper Bins				,	
380		* Commercial/Non-profit Incentives						
381		* Partner with Headwater Cooperative Recycling						
000		* Cost/Benefit - Per Transaction @ Transfer	Declaring Recycling @Transfer Station, weight not charged against permit					
382 383		* Coot/Densit "Dive Des" and side are seen	allowance-Incentive to Recycle					
303		* Cost/Benefit - "Blue Bag" curbside programs	Additional funding provided in FY11  Added Office Paper to accepted items 7/12, began delivering Blue Bags					
384			9/12					
385		* Staff Incentives - City Office/Facil. waste reduction	7/12					
386		* In-Building Recycling Bins	Implemented					
-		* City permitted/funded/sponsored - guidelines	Insert in IR in 2011 with Recycling Guidelines, Handout with Map of all					
387			Recycling Sites, Involved with America Reycles Day					
388		* Assume S.A.V.E.s plastic & recycling - go monthly	City contributes bins & staff time towards S.A.V.E.'s recycling efforts					
389		* Analysis - Full Cost Waste Disposal vs. Recycling						
		* Expand Recycling utilizing existing capacity	Began E-Waste Program, added Textiles and Ink Cartridges in FY11, Built					
390			Oil & Antifreeze Structure in FY13				1	
391		* Recycling Sorting and Convenience Center						
392		* Additional Glass Collection locations	Glass collected in Roll-offs @ Transfer Station					
393 394	g.	Composting  Landfill & Incineration (if all else fails)	Partnered with L & C County for Composting FY12					
394	n.	Landin & incheration (if all else falls)						
396	5 Fmpl	oyee Commute and Waste Reduction						
		Consider alternate schedules (4/10's) for more offices to	Consider closing facility 1 day a week from 7 days a week operation to 6					
		reduce travel one day per week.	days a week, changing some employee schedules to 4/10's. April 2013 -					
397		, F	schedule proposed					
398								
399	6 Shopp	ping Bags - Per-Bag Fee System TWRP -	5					
400	a.	x	X					
401								

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	Note: A	ction Plan Items are shown in Sections B. thru E. b	alow	Comments	Status	Differential	Energy Saved	Dollars Saved	Comments
5	Note: A	Cuon I tan Hems are snown in Sections B. inra E. bo	elow	Comments	Status	Differential	Energy Saveu	Donars Saveu	Comments
6			THURD						
402		Bottled Water - Back-to-the-Tap Policy	TWRP - 6						
403		a. Internal Audit - Bottled Water Usage							
404		<b>b.</b> City Sponsored/Permitted Events - Audit Sales							
405 406		c. Education - Employees & Residents							
406		<b>d.</b> City Employees - Eliminate purchases							
407		e. Ban Sale - City Sponsored/Funded/Permitted Events							
408									
408 409	8	Homes - Energy and Efficiency Audits & Retrofits	TWRP - 7						
		a. Partnerships - 100 homes		Green Blocks Pilot Program	Completed w/ help of HCC; expedited review				
					process for installation of insulation (no permit				
410					required for installation)				
410 411		<b>b.</b> Education			,				
412									
413	9	Food - Local Food Production & Consumption	TWRP - 8						
414		>> City accomplishment recognized in the Action Plan		Ongoing Permitting of Farmers Market					
415		>> City accomplishment recognized in the Action Plan		Waukesha Community Gardens since 1970					
415 416		>> City accomplishment recognized in the Action Plan		YMCA Community Garden					
417		>> City accomplishment recognized in the Action Plan		Community Garden Plans - New Neighborhood Parks					
418 419 420		a. Farmers Market - support							
419		<b>b.</b> Community Gardens - Partner & Create							
420		P&R - Community Garden design & construction		In the development stage	2010/11 - 2 new community gardens in process				
421		c. Community Gardens - Administrative Management			_				
422		d. Website Links - gardening resources							
423 424		e. Permitted community gardens as use by right		Accommodates community gardens in residential neighborhoods	Completed				
424					-				
425	MATRIX	KEY							
426 427 428 429		New or updated							
427	February 2	26, 2013							
428									
429	se								